

DETAILED ACTION

Specification

1. The amendment filed on 8/21/09 is objected to under 35 U.S.C. 132(a) because it introduces new matter into the disclosure. 35 U.S.C. 132(a) states that no amendment shall introduce new matter into the disclosure of the invention. The added material which is not supported by the original disclosure is as follows: "...setting a visibility query identifier (also referred to as a query status value)..." (specification, p. 2, ¶ 11).

Applicant is required to cancel the new matter in the reply to this Office Action.

Claim Rejections - 35 USC § 101

2. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

3. Claims 2, 3, 5, 6, 20 and 21 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. Said claims fail to fall within one of the four statutory categories of invention. Supreme Court precedent¹ and recent Federal Circuit decisions² indicate that a statutory "process" under 35 U.S.C. 101 must (1) be tied to another statutory category (such as a particular apparatus), or (2) transform underlying subject matter (such as an article or material) to a different state or thing. While the instant claim(s) recite a series of steps or acts to be performed, the claim(s) neither transform underlying subject matter nor positively tie to another

¹ *Diamond v. Diehr*, 450 U.S. 175, 184 (1981); *Parker v. Flook*, 437 U.S. 584, 588 n.9 (1978); *Gottschalk v. Benson*, 409 U.S. 63, 70 (1972); *Cochrane v. Deener*, 94 U.S. 780, 787-88 (1876).

² *In re Bilski*, 88 USPQ2d 1385 (Fed. Cir. 2008).

statutory category that accomplishes the claimed method steps, and therefore do not qualify as a statutory process. For example, a process for object based visibility culling comprising receiving, comparing and rendering steps is of sufficient breadth that it would be reasonably interpreted as a series of steps completely performed mentally, verbally or without a machine. While claim 21 discloses an apparatus it is noted that "the mere use of the machine to collect data necessary for application of the mental process may not make the claim patentable subject matter." *Comiskey*, 499 F.3d at 1380 (citing *In re Grams*, 888 F.2d 835, 839-40 (Fed. Cir. 1989)). In other words, nominal or token recitations of structure in a method claim should not convert an otherwise ineligible claim into an eligible one.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

5. Claims 2, 3, 5, 6, 11-16, 20 and 21 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter (e.g., "...receives a plurality of draw packets associated with a high resolution geometric object; compares each of the plurality of draw packets to a bounding volume object, wherein the bounding volume object is a low resolution geometric representation of the specific object identified as geometry through which viewing definitions are defined..." – claim 11, ll. 6-10, "...receiving a plurality of draw packets associated with a high resolution geometric representation of a specific object;

comparing each of the plurality of draw packets to a bounding volume object, wherein the bounding volume object is a low resolution geometric representation of the specific object identified as geometry whose visibility status is desired..." – claim 21, ll. 3-7) which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Instead the specification discloses: "The method and apparatus further includes comparing each of the plurality of draw packets to a bounding volume object, wherein the bounding volume object may be a low resolution geometric representation of a specific object, such as a window, doorway, or any other suitable portal through which viewing definitions may be defined." – pp. 2-3, ¶ 11; "In one embodiment, the graphics processing unit 100, more specifically the command processor 108, generates a bounding volume object, such as a low resolution model as simple as a rectangular box, which is rendered prior to the detailed model..." – pp. 4-5, ¶ 15. In other words the specification fails to disclose that said plurality of draw packets are associated with a high resolution geometry or that said bounding volume object is a lower resolution representation (e.g., version) of a higher resolution object associated with said draw packets.

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claims 5 and 11-16 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

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8. In regard to claim 5 said claim recites the limitation "...setting of the visibility query identifier" (line 3). There is insufficient antecedent basis for this limitation in the claim. Clarification is requested.

9. In regard to claims 11-16 claim 11 recites the limitation "...a low resolution geometric resolution of the specific object identified..." (ll. 9-10). There is insufficient antecedent basis for this limitation in the claim. Clarification is requested. For the purposes of applying prior art it is noted that "a low resolution geometric resolution of the specific object identified" is considered to read "a low resolution geometric resolution of the high resolution geometric object identified."

Response to Arguments

10. In response to applicant's remarks in regard to the prior 35 U.S.C. 101 rejection the applicant is directed to the respective above rejection which has been clarified to address applicant's remarks.

11. In response to applicant's remarks in regard to the respective art rejections disclosed in the Office Action mailed on 3/23/09 it is noted, in light of the respective above 35 U.S.C. 112 second paragraph rejections, that the cited prior art of record fails to teach or suggest the respective limitations of claim 11 and 21 when considered as a whole, respectively.

12. The applicant is invited to contact the examiner to schedule an interview to discuss the instant Office Action.

Conclusion

13. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to **PETER-ANTHONY PAPPAS** whose telephone number is (571) 272-7646. The examiner can normally be reached on **M-F 9:00AM-5:30PM**.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **Ulka Chauhan** can be reached on **571-272-7782**. The fax phone number for the organization where this application or proceeding is assigned is **571-273-8300**.

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/Peter-Anthony Pappas/
Primary Examiner, Art Unit 2628